

# 2011-02-10 Thursday Morning Notes

Thursday, February 10, 2011  
7:35 AM

## Stacking and Transfers

- Stacked 26.5 mA/hr with a production of 21.8 pbar/Mp with 7.47 Tp on target.
- Unstacked 837 E10 (419 E10/day) pbars in 105 transfers (53/day) over 34 sets (17/day) with an overall average efficiency of 95.8%

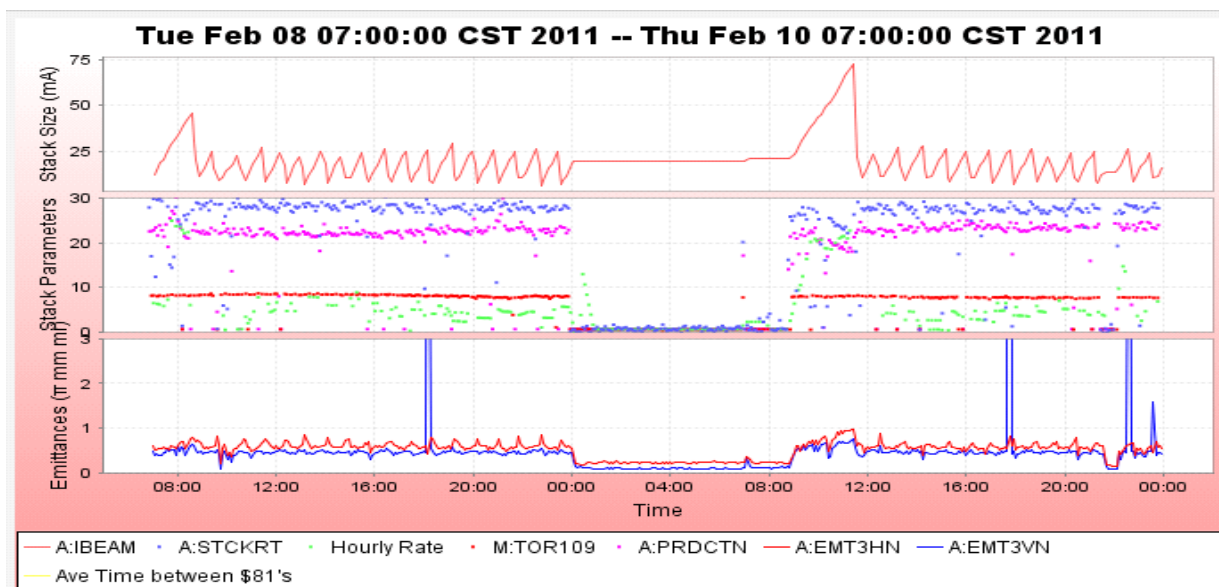
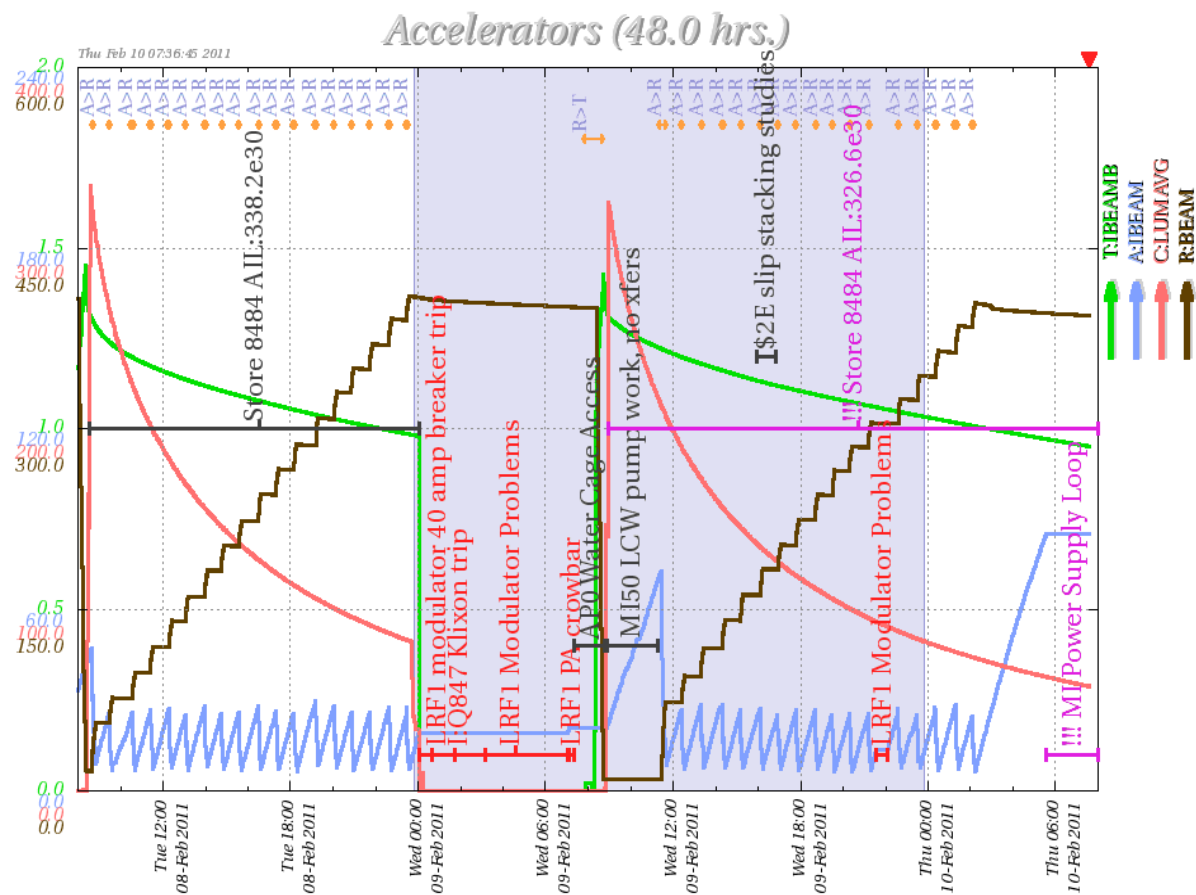
## Interesting Happenings

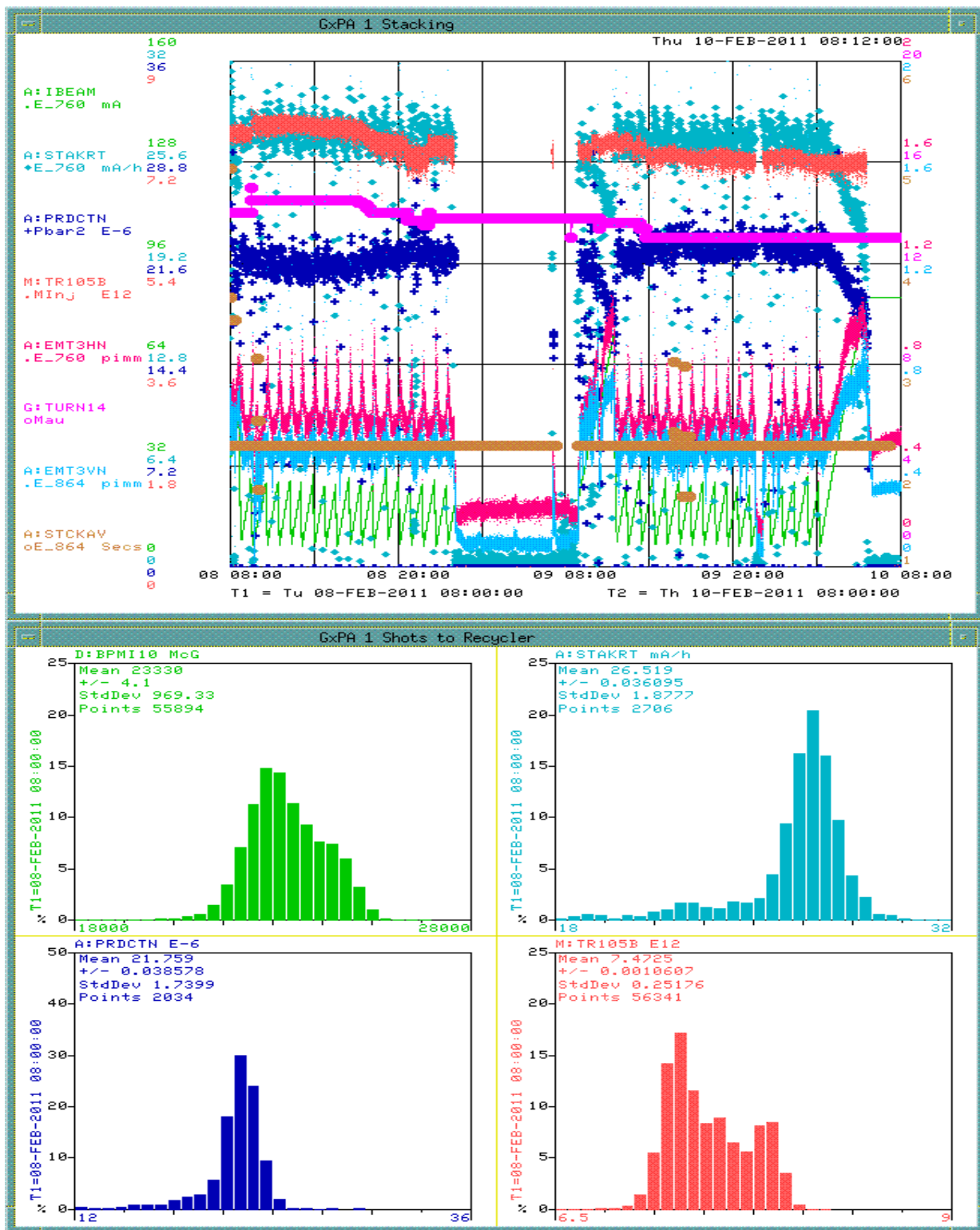
- Pbar Dry Engine cold valve change: Cryo did a cold valve replacement on the dry engine this morning, following a special procedure that avoided crashing the frig. According to their elog, they found grease in the #2 exhaust. The refrigerator is looking much better after their work. During repairs, DVM launched his ACL script that monitors and adjusts the stacktail notch 3 timing. We are so sensitive to the cryo, that turning off the dry engine shifted the timing enough so that we were unable to stack until an initial adjustment was made. The ACL script continued to compensate for the shifting timing for several hours after the dry engine was back on line.

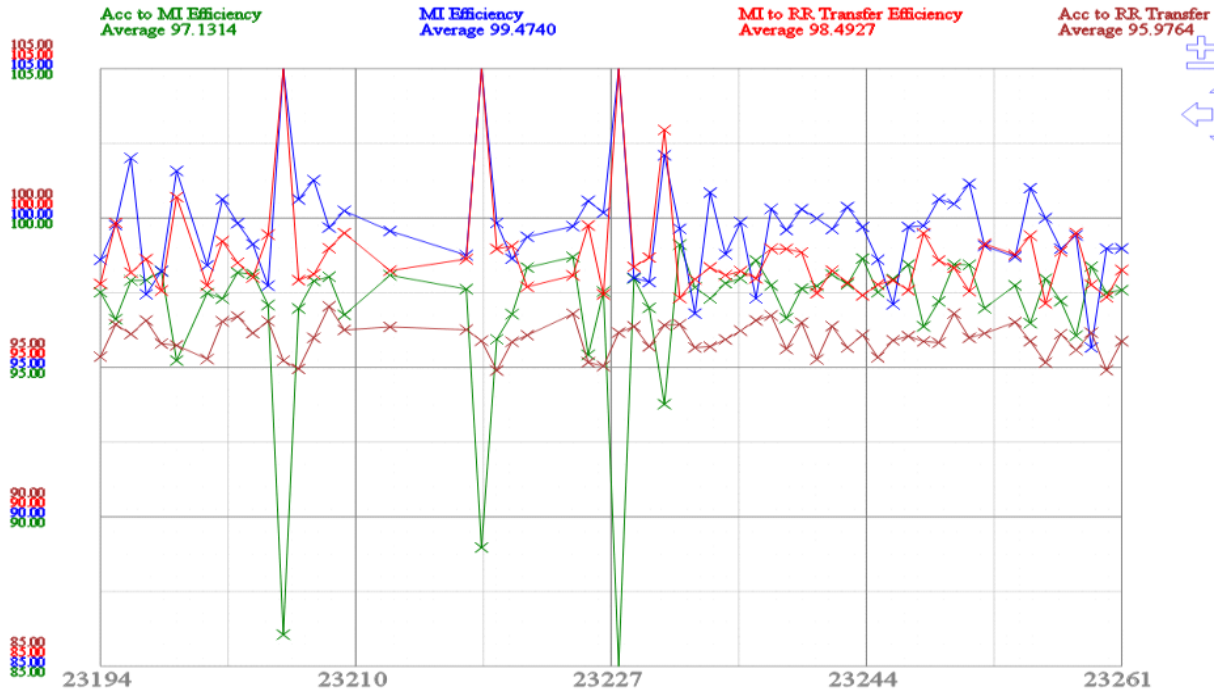
## Numbers (2 days)

- Stacking
  - Pbars stacked: 921.38 E10
  - Time stacking: 37.06 Hr
  - Average stacking rate: 24.86 E10/Hr
- Uptime
  - Number of pulses while in stacking mode: 59892
  - Number of pulses with beam: 56517
  - Fraction of up pulses was: 94.36%
- The uptime's effect on the stacking numbers
  - Corrected time stacking: 34.97 Hr
  - Possible average stacking rate: 26.35 E10/Hr
  - Could have stacked: 976.40 E10/Hr
- Recycler Transfers
  - Pbars sent to the Recycler: 842.45 E10
  - Number of transfers : 106
  - Number of transfer sets: 35
  - Average Number of transfer per set: 3.03
  - Time taken to shoot including reverse proton tuneup: 00.37 Hr
  - Transfer efficiency: 95.14%
- Other Info
  - Average POT : 7.47 E12
  - Average production: 21.82 pbars/E6 protons

## Plots







Column 1 Number _0_Pbar Transfer Shot #	Column 4 Number_3_Transfer Time	Column 21 Number _20_A-I BEAMB sampled on \$91 (A-BEA M7). E10	Column 22 Number _21_A-I BEAMB sampled on \$94 (A-BEA M9). E10	Unstacked (mA)	Column 23 Number _22_R- BEAMS (R-BEA ME0[0]) pre after E10	Column 24 Number _23_R- BEAM (R-BEA ME0[1]) post after, E10	Stashed	Acc to RR Eff	Acc to MI Eff	Acc to MI2 Eff	Acc to MI * Acc to MI2 Efficiency	Trans fers	Sets	Column 5 Number _4_Ace Horizontal Emittanc e	Column 6 Number _5_Ace Vertical Emittanc e	Column 8 Number _7_Ace Longitu dinal Emittanc e	
Totals =>				837.17			802.09	95.81%	97.38%	96.95%	94.41%	105	34	5.8015	4.4076	1.9474	
Daily Average =>				418.59			401.05					53	17				
23261	Thursday, February 10, 2011	2:06	25.28	6.22	21.75	384.52	404.76	20.85	95.88%	97.91%	96.13%	94.13%	3	1	5.436	4.276	1.955
23260	Thursday, February 10, 2011	1:18	28.68	7.03	24.37	363.48	386.20	23.13	94.92%	97.38%	96.27%	93.74%	3	1	5.795	4.335	1.938
23259	Thursday, February 10, 2011	0:21	26.81	6.51	22.93	343.48	365.01	22.02	96.04%	98.70%	95.26%	94.02%	3	1	5.694	4.313	1.923
23258	Wednesday, February 09, 2011	23:29	25.31	6.80	21.25	324.31	344.37	20.35	95.74%	96.03%	95.27%	91.49%	3	1	5.688	4.267	1.982
23257	Wednesday, February 09, 2011	22:35	26.05	6.91	21.85	304.34	325.08	21.01	96.14%	97.62%	96.54%	94.24%	3	1	5.644	4.324	1.974
23256	Wednesday, February 09, 2011	21:11	25.57	6.47	21.79	284.89	305.44	20.77	95.29%	97.77%	98.22%	96.04%	3	1	5.571	4.306	1.958
23255	Wednesday, February 09, 2011	20:18	25.41	6.48	21.61	265.22	285.61	20.75	95.98%	96.80%	96.94%	93.84%	3	1	5.596	4.377	1.962
23254	Wednesday, February 09, 2011	19:29	25.55	6.43	21.80	245.33	265.96	21.00	96.35%	98.17%	97.18%	95.40%	3	1	5.303	4.272	1.947
23252	Wednesday, February 09, 2011	17:47	26.84	6.75	22.75	203.67	225.27	21.86	96.09%	97.12%	96.85%	94.06%	3	1	5.897	4.27	1.938
23251	Wednesday, February 09, 2011	16:56	25.67	6.76	21.60	183.72	204.23	20.72	95.94%	98.36%	99.05%	97.42%	3	1	5.598	4.433	1.952
23250	Wednesday, February 09, 2011	16:05	27.19	7.08	22.86	162.42	184.12	22.07	96.54%	98.22%	98.28%	96.53%	3	1	5.635	4.459	1.97
23249	Wednesday, February 09, 2011	15:11	27.03	7.15	22.61	141.41	162.74	21.62	95.62%	97.09%	97.58%	94.73%	3	1	5.921	4.446	1.948
23248	Wednesday, February 09, 2011	14:19	28.93	6.98	24.72	118.16	141.57	23.73	95.98%	96.76%	96.46%	93.33%	3	1	5.461	4.328	1.941
23247	Wednesday, February 09, 2011	13:19	28.84	7.11	24.44	95.13	118.41	23.53	96.26%	98.30%	97.78%	96.11%	3	1	5.751	4.208	1.933
23246	Wednesday, February 09, 2011	12:23	27.14	6.78	23.05	73.38	95.31	22.15	96.08%	97.95%	95.48%	93.52%	3	1	5.726	4.469	1.94
23245	Wednesday, February 09, 2011	11:26	73.17	7.97	69.62	9.64	73.78	65.88	94.63%	97.58%	96.12%	93.79%	5	1	6.787	4.856	1.813
23244	Tuesday, February 08, 2011	23:28	25.89	6.91	21.69	390.41	410.79	20.83	96.04%	98.71%	98.08%	96.81%	3	1	6.177	4.399	1.962
23243	Tuesday, February 08, 2011	22:38	27.72	6.36	23.77	369.51	391.86	22.78	95.83%	98.06%	98.27%	96.36%	3	1	5.934	4.651	1.946
23242	Tuesday, February 08, 2011	21:43	26.24	6.30	22.46	349.62	370.86	21.66	96.43%	98.01%	97.84%	95.90%	3	1	5.59	4.211	1.956
23241	Tuesday, February 08, 2011	20:51	25.84	6.73	21.84	330.10	350.75	20.84	95.43%	97.84%	97.47%	95.37%	3	1	5.576	4.389	1.959
23240	Tuesday, February 08, 2011	20:03	28.41	7.24	23.81	308.48	330.99	22.94	96.33%	97.81%	97.34%	95.20%	3	1	5.52	4.49	1.928
23239	Tuesday, February 08, 2011	19:11	30.05	8.52	24.10	286.67	309.28	23.03	95.53%	97.01%	96.88%	93.99%	3	1	5.841	4.945	1.966
23238	Tuesday, February 08, 2011	18:10	25.67	6.17	22.27	266.32	287.47	21.53	96.68%	97.84%	97.64%	95.54%	3	1	6.201	4.226	1.971
23237	Tuesday, February 08, 2011	17:19	26.53	6.79	22.48	245.62	266.98	21.69	96.52%	98.23%	96.13%	94.43%	3	1	5.758	4.255	1.953
23236	Tuesday, February 08, 2011	16:30	28.38	7.19	23.91	223.56	246.18	22.97	96.04%	98.13%	97.35%	95.53%	3	1	6.037	4.522	1.943
23235	Tuesday, February 08, 2011	15:34	26.12	6.58	22.25	202.99	224.10	21.31	95.78%	97.93%	97.40%	95.38%	3	1	5.931	4.382	1.957
23234	Tuesday, February 08, 2011	14:44	25.55	6.57	21.75	182.71	203.41	20.82	95.69%	97.58%	98.16%	95.78%	3	1	5.81	4.404	1.974
23233	Tuesday, February 08, 2011	13:57	28.02	7.48	23.36	160.98	183.11	22.35	95.65%	97.50%	94.48%	92.12%	3	1	5.857	4.443	1.961
23232	Tuesday, February 08, 2011	13:03	25.14	6.42	21.44	140.93	161.38	20.66	96.35%	98.80%	98.82%	97.64%	3	1	5.681	4.084	1.977
23231	Tuesday, February 08, 2011	12:16	27.29	7.00	22.98	119.35	141.16	22.16	96.40%	93.16%	95.96%	89.39%	3	1	5.951	4.484	1.955
23230	Tuesday, February 08, 2011	11:25	26.75	6.85	22.66	98.12	119.67	21.73	95.87%	97.40%	96.01%	93.51%	3	1	5.944	4.309	1.948
23229	Tuesday, February 08, 2011	10:33	26.42	6.86	22.28	77.03	98.28	21.46	96.32%	97.96%	96.54%	94.57%	3	1	5.703	4.284	1.948
23228	Tuesday, February 08, 2011	9:28	26.05	6.70	22.00	56.29	77.23	21.17	96.21%	89.60%	97.10%	87.00%	3	1	5.663	4.349	1.935
23227	Tuesday, February 08, 2011	8:39	47.77	8.57	43.09	16.46	56.53	40.76	94.57%	97.32%	97.12%	94.51%	4	1	6.574	5.084	1.899